INSTITUT C.D. HOWE INSTITUTE

COMMENTARY
NO. 437

First Nations Own-Source Revenue: How Is the Money Spent?

The growth of First Nations commercial ventures over the past generation raises important questions about how much money First Nations are raising from market-based activities and how are they spending it.

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Commentary No. 437
October 2015
Public Governance and Accountability

$12.00
ISBN 978-0-88806-959-7
ISSN 0824-8001 (print);
ISSN 1703-0765 (online)

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The Study In Brief

The confluence of several factors – favourable Supreme Court of Canada decisions, the rise (until recently) in natural resource prices and the emergence of a cadre of well-educated on-reserve leaders – has encouraged the growth of First Nations commercial ventures over the past generation. This growth raises important questions: How significant is own-source revenue (much of it derived via First Nations-owned corporations) in financing First Nations governments? How are these governments spending incremental revenue that arises from market-based activities?

Before the passage in 2013 of the *First Nations Financial Transparency Act* (FNFTA), relevant audited statements of First Nations were hard to obtain, if indeed they were publicly available. The FNFTA requires First Nations to publish online audited statements of revenues and expenditures, which enables hitherto unavailable insights into First Nations budgeting priorities.

Our analysis of a sample of 72 FNFTA filings submitted by First Nations in Ontario, covering the fiscal years 2013 and 2014, finds that own-source revenue comprises, on average, nearly a third of total First Nations government revenues. First Nations with higher per capita own-source revenue increase economic development activities but only modestly increase education and health spending. They also undertake large increases in spending on general government and business management. Whether large increases in this last category are warranted is an important question for members of First Nations to address.

Interpreting the audited statements of First Nations governments is difficult, however, because they do not apply standardized protocols to identify revenue and expenditure categories. Furthermore, some undetermined portion of their own-source revenue derives from impact and benefit agreements negotiated between First Nations councils and resource developers. These agreements are usually confidential and details about them in audited statements are scant. Finally, since our sample is derived from First Nations communities in Ontario, it might not be representative of pan-Canadian experience.

Our results are an admittedly tentative look at the data derived from the audited statements, but two obvious policy conclusions emerge from the analysis. First, since the FNFTA is intended to help First Nations assess the budgeting activities of their respective councils, one simple policy recommendation would be to introduce more uniform and informative accounting protocols, which would considerably aid those interested in undertaking this task. Second, since many First Nations apparently do not consider it appropriate to use own-source revenue to finance basic education and health services, the onus for education funding will continue to fall squarely on the federal government.

In the end, of course, it is up to First Nations people themselves to determine their financial priorities.

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Section 35 (1) of the *Constitution Act*, 1982, states: "The existing aboriginal and treaty rights of the aboriginal peoples of Canada are hereby recognized and affirmed."

In key subsequent decisions, the Supreme Court of Canada has determined that Aboriginal treaty rights and claims over traditional lands are far more substantive than was presumed three decades ago.[1]

If they choose to do so, First Nations – and some Métis and Inuit – communities now have the opportunity to capture significant revenue and employment from participation in market-based activities, especially those involving access to traditional lands. In addition to favourable Supreme Court decisions, the rise (until recently) of natural resource prices has increased the incentive for First Nations to enter into agreements with resource developers. As well, First Nations education levels have risen, albeit only slowly, over the past two generations, which has created a cadre of First Nations leaders able to assume responsible roles in commercial ventures.[2] A symbol of the increased interest in commercial activities among First Nations is the emergence of several hundred economic and business development corporations owned by First Nations and a visible national organization, the Canadian Council for Aboriginal Business, to advocate for them (CCAB 2015).

How significant is own-source revenue, much of it derived via First Nations–owned corporations, in financing First Nations governments? How are these governments spending incremental revenue arising from market-based activities? These are important questions for members of First Nations communities, and other Canadians, to pose. Before the passage in 2013 of the *First Nations Financial Transparency Act* (FNFTA), which requires First Nations to publish online audited statements of revenues and expenditures, relevant audited statements of First Nations were hard to obtain, if indeed they were publicly available. The FNFTA now enables hitherto unavailable insights into the budgeting priorities and financial operations of First Nations governments.[3]

We acknowledge the careful advice of Benjamin Dachis in preparing this *Commentary*, as well as comments from other policy analysts at the C.D. Howe Institute and from external anonymous reviewers. Finally, we thank James Fleming, Barry Norris and others who prepared the manuscript for publication. The usual caveat as to the authors' responsibility for inadequacies applies.

1 The major decisions include *Guerin, Sparrow, Gladstone, Delgamuukw, Haida* and, most recently, *Tsilhqot'in*. For an accessible survey of key post-1982 Supreme Court decisions bearing on Aboriginal treaty rights, see Wright and White (2012). For an editorial exchange on the recent *Tsilhqot'in* decision, see Coates and Gibson (2014). Although the overwhelming majority of these decisions concern those who define themselves as First Nations, some decisions concern Métis claims and others refer to Inuit. For example, in *Powley*, a case initiated by the Manitoba Métis Federation, the Supreme Court established certain Métis hunting rights.

2 Although education levels on-reserve have risen over time, the improvement among First Nations people has been primarily among those living off-reserve (Richards 2014a).

3 Audited statements are available online at the website of Aboriginal Affairs and Northern Development Canada (AANDC 2014).

In this *Commentary* , we report our analysis of a sample of 72 FNFTA filings submitted by First Nations in Ontario, covering fiscal years 2012/13 and 2013/14.[4] According to the 2011 census, the total population of these communities was 111,000. To summarize the results, own-source revenue comprises, on average, nearly a third of total First Nations government revenues in the 2013/14 fiscal year. Based on a cross-sectional analysis of the sample, First Nations with higher per capita own-source revenue increase economic development activities, but increase spending on education and health only modestly. They also undertake large increases in spending on general government activities and business management.

Several caveats are in order. First Nations audited statements do not use standardized protocols to identify revenue and expenditure envelopes; accordingly, we have done our best to allocate items to the relevant envelopes. Furthermore, some undetermined portion of First Nations own-source revenue derives from impact and benefit agreements (IBAs) negotiated between First Nations councils and resource developers. These agreements are usually confidential and details about them in audited statements are scant. Finally, since our sample is derived from First Nations communities in Ontario, it might not be representative of pan-Canadian experience.

Our results are an admittedly tentative look at the data derived from the audited statements, but two obvious policy conclusions emerge from the analysis.

First, since the FNFTA is intended to help First Nations assess the budgeting activities of their respective councils, one simple policy recommendation would be to introduce more uniform and informative accounting protocols, which would considerably aid those interested in undertaking this task. As well, the *Extractive Sector Transparency Measures Act* will require resource companies to publish payments they make to Aboriginal communities after June 2017, and will also shine light on First Nations finances and improve accountability to band members.[5] In the end, of course, it is up to First Nations people themselves to determine their financial priorities.

The second conclusion that emerges from the sample is that, since many First Nations apparently do not consider it appropriate to use own-source revenue to finance basic education and health services, the onus for education funding will continue to fall squarely on the federal government. Ottawa must now return to that file despite the failure of the comprehensive on-reserve school reform legislation and school funding proposals tabled in Parliament in 2014. Almost certainly, low on-reserve education levels are severely constraining the potential for First Nations to generate high-wage skilled employment for their members from economic development activities.

The Evidence on First Nations Own-Source Revenue Spending

From the 99 Ontario First Nations financial audits we consulted, we restricted our analysis to 72 (see Appendix B for details). Figures 1 and 2 illustrate some basic descriptive statistics on revenue sources. In analyzing a sample of FNFTA statements in Ontario, we allocated revenues to three envelopes:

- grants from Aboriginal Affairs and Northern Development Canada (AANDC) intended to fund basic services such as schools, as well as basic band governance;

4 Specifically, these are the fiscal years that go from April 1, 2012 to March 31, 2013 and April 1, 2013 to March 31, 2014.

5 The *Extractive Sector Transparency Measures Act* was proclaimed in force in June 2015.

- grants from other government agencies, such as Canada Mortgage and Housing Corporation, and minor sources not included elsewhere; and
- own-source revenue that arises from diverse market-based activities, ranging from gambling casinos to IBAs negotiated with resource developers (see Appendix A for an elaboration of the legal framework determining First Nations access to commercially based own-source revenue).

Figure 1 illustrates the revenue sources of First Nations governments. The own-source revenue envelope constitutes, on average, 31 percent of total band revenues, the AANDC envelope is 44 percent and revenue from other government agencies accounts for 25 percent. Of more interest is Figure 2, which shows First Nations revenues on a per capita basis, according to the 2011 on-reserve census population.[6] In each figure, the statistics show results for each revenue source at the 90th, 50th (median) and 10th percentiles. The range is large: the ratio of own-source revenue between the 90th and 10th percentiles at the First Nations government level is over 7:1; normalized by population, the ratio is 6:1. There is a positive correlation between per capita own-source revenue and the per capita total of all other revenue sources. Whatever the value of own-source revenue, it is accentuating per capita inequality in revenues across reserves.

Similarly, we allocated most expenditures to four envelopes:

- education programs, including pre-kindergarten and post-secondary programs;
- health programs, including traditional health initiatives, public health initiatives and public health-related education efforts;
- expenditures identified as relating explicitly to economic development; and
- expenditures on the management of economic development corporations and general band administration.

Figures 3 and 4 plot our estimates of per band member spending by First Nations in the sample on the four broad spending envelopes against their respective per capita own-source revenues. To simplify the presentation, we aggregated the sample data into deciles, that is, we assign each First Nation community into one of ten groups, ranked by per capita own-source revenue. The scatterplot figures illustrate decile averages for own-source revenue and, for each decile, the corresponding average per capita spending on the four envelopes.

In the case of First Nations with no own-source revenue, education and health spending is financed largely by AANDC transfers.[7] AANDC also funds some First Nations spending on general band administration. In the absence of own-source revenue, negligible economic development spending occurs. According to the trend lines in Figure 3,[8] $1,000 of additional per capita own-source revenue increases education and health spending by roughly $100 per person; the majority of incremental revenue is spent elsewhere. As to be expected, economic development programming expands as a function of increased own-source revenue. In the typical First Nation, this likely includes funding for local development corporations as well as programs designed to enhance job skills. Spending on general government and business administration necessarily increases alongside increasing engagement in business activities. Hence, a positive link is to be expected.

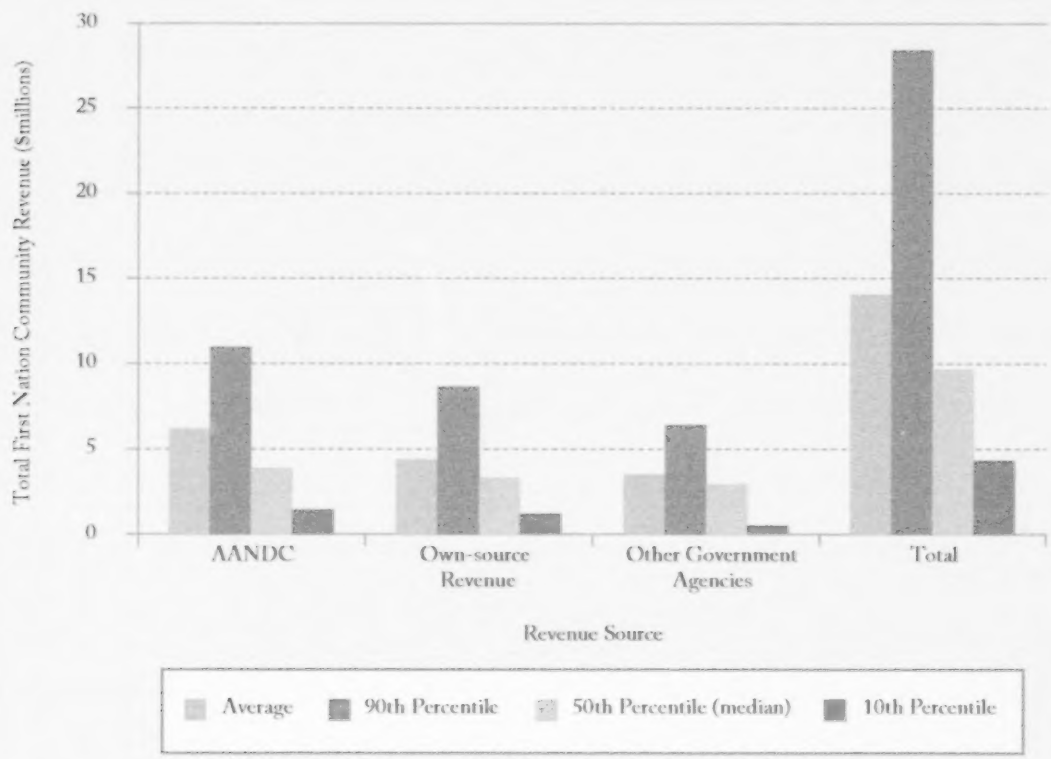
Arguably, First Nations with own-source revenue above the 9th decile should be treated as

6 There are often errors in the census count of First Nations people, however, due to underreporting and incorrect attribution of residence.

7 The education statistic entails averaging over residents, not students.

8 The trend lines arise from regressing average decile spending for each envelope on average decile own-source revenue.

Figure 1: Revenue Sources, Selected First Nations, Ontario, 2013/2014 Fiscal Year



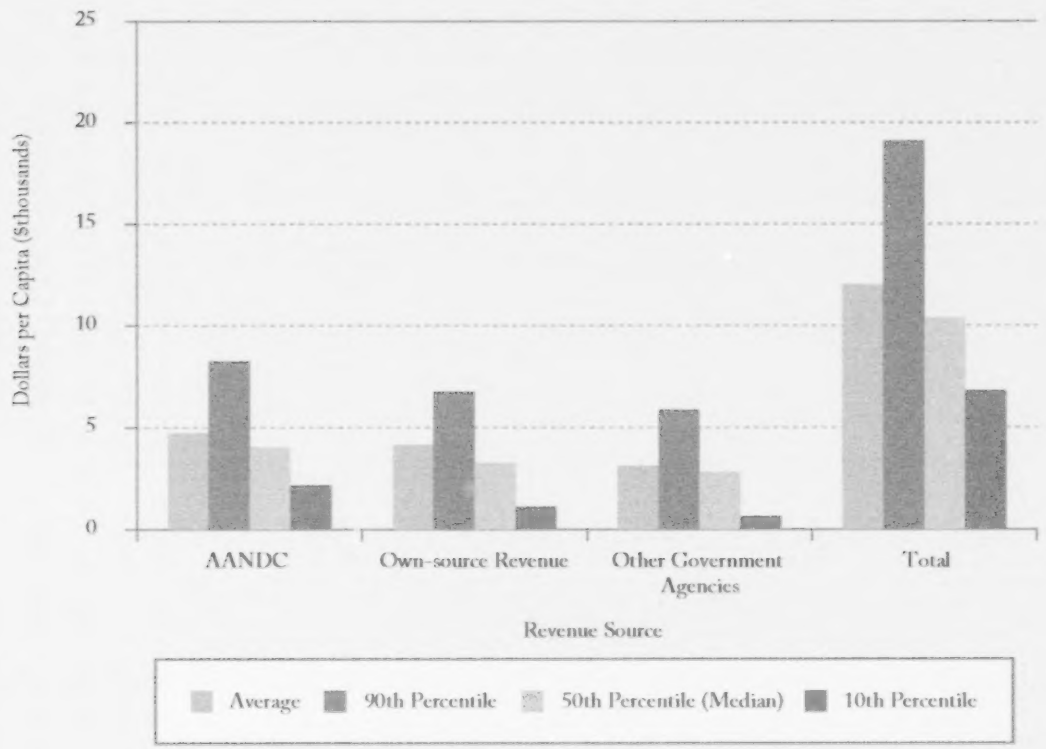
Note: Each First Nation community is assigned to one decile. The richest have income in the 10th decile, or above the 90th percentile.

Source: Authors' calculations from 72 First Nations financial reports.

unrepresentative outliers, since their average per capita own-source revenue is twice the average of those in the 9th decile. If we ignore the top decile, the slope of the resulting government/administration trend line is $650 per $1,000 increment in per capita own-source revenue. If we calculate a similar trend line for economic development spending, the incremental spending per $1,000 of own-source revenue is $240. (Ignoring the top decile induces only small changes to the slopes of the trend lines for education and health spending, so we do not report the trend lines separately.)[9]

9 Simple multivariate regressions allow us to estimate the effect on each of the four per capita spending envelopes of variations in the three per capita revenue envelopes; see Appendix C for the regression results, which are broadly similar to those shown in the trend lines.

Figure 2: Revenue Sources Per Capita, Selected First Nations, Ontario, 2013/14 Fiscal Year



Note: Each First Nation community is assigned to one decile. The richest have income in the 9th decile, or above the 90th percentile.

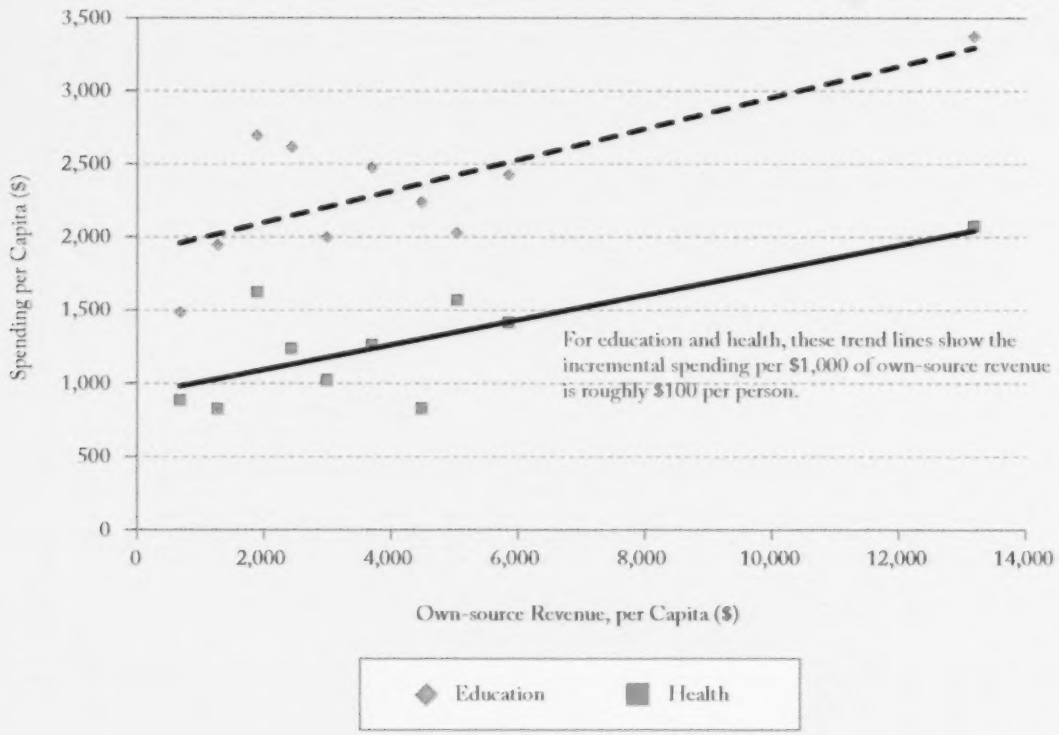
Source: Authors' calculations from 72 First Nations financial reports.

The fact that incremental own-source revenue is associated with very large incremental spending on government and business administration might suggest excessive spending on these activities. However, the audited statements of the First Nations in our sample do not contain sufficient detail to hazard an answer as to whether or not administrative spending is excessive. A common assumption about own-source revenue is that it goes toward financing large capital projects, such as housing and infrastructure. Again, however, the available accounts do not confirm or challenge this assumption. Current accounting protocols for First Nations audits employ diverse rules for valuing infrastructure and its depreciation, but we have not analyzed the issue.

Policy Discussion

Although our work is only a first look at the information on First Nations finances provided by the FNFTA, we can draw a few lessons.

Figure 3: Spending on Education and Health, per Capita, Relative to Own-Source Revenue, 2013/2014 Fiscal Year



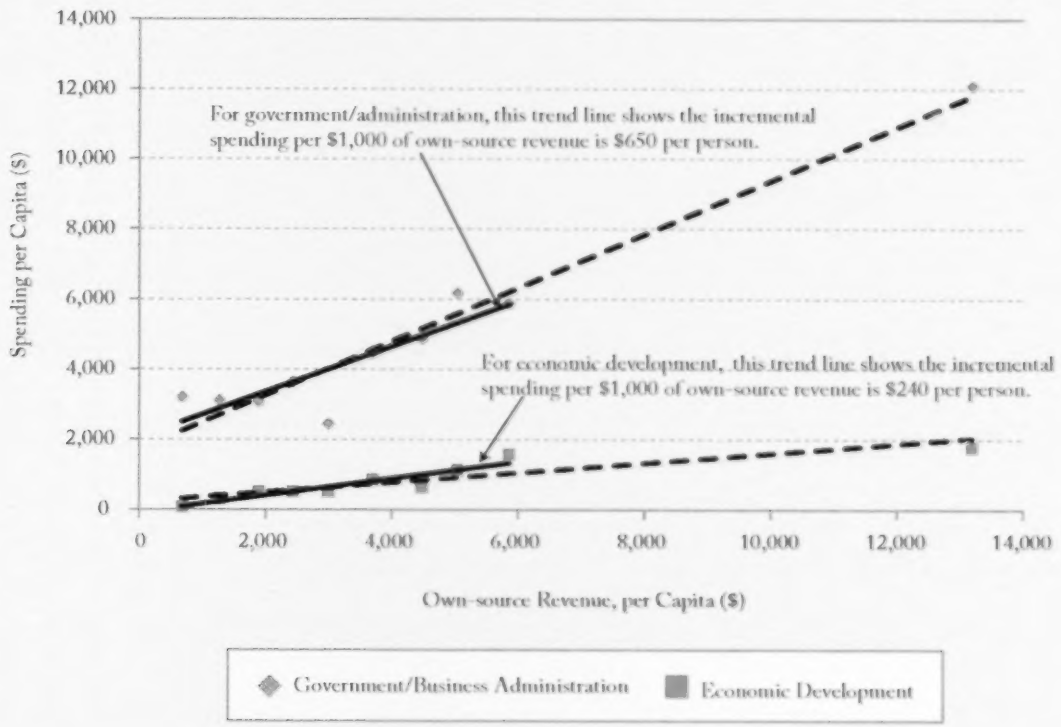
Note: Figure represents decile averages with bands allocated to deciles by per capita own-source revenues. Figure includes trend line for each data series.

Source: Authors' calculations from 72 First Nations financial reports.

Accounting Standards for First Nations Finances

We noted above that increases in spending on general First Nations government and business management activities are to be expected in the presence of higher market-based activities that, in turn, generate higher own-source revenue. Unfortunately, however, the audited statements do not provide evidence to judge if the increases in this envelope are appropriate. Here is an illustration of the case for more uniform and informative accounting protocols, which would add to the value of the posted FNFTA statements as means to inform those interested. By 2017 the *Extractive Sector Transparency Measures Act* will require resource companies to publish payments to Aboriginal communities. This is a potentially useful reform to increase accountability.

Figure 4: Spending on Economic Development and Government/Business Administration, per Capita, Relative to Own-source Revenue, 2013/2014 Fiscal Year



Note: Figure represents decile averages with bands allocated to deciles by per capita own-source revenues. Figure includes one trend line(dashed line) for all results and one (solid line) excluding the top own-source revenue decile.

Source: Authors' calculations from 72 First Nations financial reports.

Empowering First Nations Community Members with Financial Information

A major rationale for the FNFTA is to help members of First Nations to assess the revenue-raising and expenditure activities of their band councils. A recent civil case provides a telling example of the role of information in empowering band members. A small First Nation in southeastern British Columbia received $125,000 from the regional district for permitting a road to pass through the reserve. Five councillors decided *in camera* to award themselves an honorarium of $5,000 each. Upon learning of the matter, a member of the First Nation launched a suit against the five for breach of fiduciary duty. At the trial level, the plaintiff lost, but the BC Court of Appeal reversed the decision. In a unanimous decision, Justice Newbury said, "The conclusion seems to me inescapable that this was a breach of fiduciary duty, even in the context of a relatively informal and custom-based governance structure. In my view, such a structure should not deprive members of the Band of the protection of the fiduciary principle.

They were entitled to hold the defendants to the high standard to which other fiduciaries are held in this country."[10] The amount involved in this case ($25,000) was relatively small, but the case might well be a harbinger of things to come as First Nations become increasingly engaged in market-based activities and their members become more conscious of the significance of own-source revenue.

Funding Basic Education and Health Services

One reason First Nations should not rely on own-source revenue as a means to finance social policy budgets is its volatility. Social program budgets should be stable. Some 41 percent of the First Nations in our sample experienced year-over-year changes of 30 percent or more in own-source revenue, but only 9 percent of bands changed their education budgets by 30 percent or more between fiscal years 2012/13 and 2013/14. Ideally, First Nations should establish the equivalent of provincial "heritage funds" designed to accommodate variability in own-source revenue. We acknowledge, however, that allocating large sums to such a fund would be politically difficult – witness the financial difficulty in the current fiscal year of provinces hitherto dependent on large oil and gas royalties to balance their budgets.

The onus for social program funding will continue to fall squarely on the federal government, since AANDC should not expect First Nations to reorient their priorities and fund education and health services from own-source revenue. Many First Nation leaders allege that there is a large "funding gap" between AANDC's per student on-reserve expenditure and comparable provincial per student expenditure.[11] The existence and size of such depend, however, on the provincial schools used as benchmarks and what education services should be funded (Richards 2014b). We argue that AANDC's priority in education funding should be to negotiate a transparent funding agreement. We also argue that past attempts by AANDC to include a portion of own-source revenue in the funding formula have unduly complicated negotiations. Whoever pays, improving on-reserve education levels should be a high priority.

The importance of this recommendation is obvious from the census statistics, according to which only 42 percent of on-reserve young adults ages 20 to 24 had completed high school as of 2011. The percentage might rise somewhat in middle age – the high-school completion rate is 56 percent among those ages 35 to 44 (Richards 2014a) – but low on-reserve education levels are almost certainly severely constraining First Nations' potential to generate high-wage, skilled employment for their members from economic development activities.

Conclusion

Our study of data from the *First Nations Financial Transparency Act* is a preliminary analysis of the implications of the growth of own-source revenue in First Nations. Many First Nations leaders opposed the *Act* as an unwarranted intrusion of alien accounting rules (see, for example, the critique by Palmater 2014). However, an inevitable consequence of the entry of First Nations into market-based economic activities is higher expectations – on the part of both Aboriginals and non-Aboriginals – of financial transparency.

The potentially disturbing result of our analysis is the large incremental impact of own-source revenue on band administration in general. Whether this concern is warranted is an important question for members of First Nations to pursue.

10 British Columbia Court of Appeal, *Louie v. Louie*, 2015BCCA247.

11 In a forthcoming *Commentary*, Anderson and Richards assess funding of reserve schools.

Appendix A: Treaty Provisions and Enabling Laws Governing Resource Development

Legal Provisions

Canada's relationships with First Nations that signed treaties prior to 1951 are governed through the *Indian Act* (s. 2(1)(a)). This includes all First Nations in Alberta, Manitoba, Saskatchewan and Ontario. The *Indian Act* empowers the Crown to permit resource development on reserves. Most historical treaties also required First Nations to surrender legal authority over resource extraction on adjacent Crown lands, assuming that other guaranteed rights (such as the right to hunt on Crown land) can be reconciled with the development (Wright and White 2012). Treaty provisions also grant First Nations signatories specific rights over resource development on their reserve territory and surrounding land. These laws have changed over time to enhance the rights of communities to refuse unwanted development, especially within reserve lands. Ambiguity remains, however, about the extent of the Crown's obligations to consult and obtain community consent in the case of disagreement (Christie 2014; Wright and White 2012). More recent laws, such as the 2009 amendments to the *Indian Oil and Gas Act*, apply more stringent requirements for consultation and consent. Other modern treaties, such as the *Nunavut Land Claims Agreement*, have affirmed developers' need to consult with affected communities before beginning extraction activities. The defining feature of reserve lands is that the onus on extraction companies to engage with local communities is clearly defined in the law.

A more dramatic legal shift has taken place, however, in those parts of Canada that were never ceded to the Crown, such as most of British Columbia. The Supreme Court of Canada has found that First Nations with unsettled land claims have the right to provide input on the use of their claimed territories; in some cases, their express consent may be required as well. The federal government must ensure that First Nations obtain supervisory power commensurate with their presumptive claim to territory.

Aboriginal groups that have unsettled land claims have rights that are commensurate with the strength of their claim (Christie 2006). These rights are located on a sliding scale of requirements for consultation and accommodation with Aboriginal claimants that "varies with the strength of the Aboriginal group's claim to the land and the seriousness of the potentially adverse effect upon the interest claimed."[12] For most projects, the Crown – meaning either AANDC or an administrative body of the Crown, such as the National Energy Board NEB – must engage in good-faith consultations and usually accommodate First Nations' concerns with respect to development.

Three regulatory environments govern resource extraction for any given project on First Nations land. One case is where the project involves lands that have been set aside for members of First Nations registered under the *Indian Act*. Another is where the project involves land subject to an Aboriginal claim that has not been recognized officially through legislation or treaty. The third case is where the project involves land that has been set aside for an Aboriginal group under a modern treaty concluded under the Land Claims Negotiation Process (in effect since 1975).

Impact and Benefit Agreements

The role of impact and benefit agreements (IBAs) is more important in western Canada than in Ontario.

12 *Tsilhqot'in Nation v. British Columbia, 2014* SCC 44, 89.

The premise behind them is that developers must compensate a First Nations community for accepting greater environmental risk and that they share with it potential income from any resource project. Companies hoping to develop resources on claimed or reserve land, or projects that traverse that land by, say, a pipeline or high voltage power line, must contribute money directly to the First Nations government or create programs to benefit its members. In exchange, the First Nation agrees not to oppose the new development (Sanderson 2012). It is usually impossible to measure the size of payments resource companies make because IBAs are often confidential.

Although First Nations are at the heart of the matter, many observers (for example, Cleland 2014) describe a fragmentation in resource project approvals that extends beyond treaty rights. Before proceeding, many resource projects now require not only approval in accordance with prevailing regulatory requirements, but also a "social licence" from a range of groups with interests in the outcome of the project. Cleland suggests that Ottawa and provincial governments should bring order to the process; in the meantime, the process of securing a social licence remains, as he describes, "ad hoc." Interpretations of a social licence are polarized. Some understand it positively as the need for a developer to satisfy all interested parties, which assures that First Nations, not just the developer, benefit from a potential resource project (Gibson and O'Faircheallaigh 2011). Others view the need for a social licence as a suspect rationale for either rent-seeking behaviour or ideologically driven protest (Coates and Gibson 2014).[13]

To gain project approval, resource companies now frequently seek explicit consent from individual First Nations communities that might be affected. To gain such consent, developers bargain over financial compensation and other benefits, such as equity in the project or employment guarantees. Resource development remains controversial in many Aboriginal communities; nonetheless, some complex IBAs have been negotiated. A recent example is that between proponents of a pipeline to transmit natural gas to Kitimat, British Columbia, for potential export in liquefied form and the 16 First Nations through whose territories the pipeline must pass (Canada NewsWire 2015). In late 2013, Douglas Eyford[14] prepared a report for Prime Minister Stephen Harper summarizing his discussions with Aboriginal communities in Alberta and British Columbia concerning proposed pipeline projects in these two provinces to Pacific coast ports. His conclusion was basically optimistic inasmuch as he predicted both resource corporations and Aboriginal communities could "meet mutual interests":

> Industry understands the necessity of working with Aboriginal communities to meet mutual interests. Project proponents described the substantive steps they are taking to address environmental concerns and include Aboriginal Canadians in employment and business opportunities. Industry views Canada as having a role in addressing matters that go beyond project-specific proposals and regulatory reviews, such as improving educational outcomes, preparing Aboriginal people to be job ready, and

13 The reference is to an exchange on the *Tsilhqot'in* decision. Gordon Gibson is sceptical, and predicts future conflict due to uncertainty of treaty rights and rent seeking, whereas Ken Coates views positively the strengthening of Aboriginal rights implicit in the decision.

14 Eyford is a prominent Vancouver-based lawyer with broad experience in civil litigation matters as well as regulatory and administrative tribunals. He also has experience in alternative forms of dispute resolution, representing clients at arbitrations and mediations and in treaty negotiations.

> addressing unresolved Aboriginal rights and title claims in British Columbia. (Eyford 2013, 4).

Eyford's expectation of widespread use of IBAs might not materialize, however. In a more recent report on the state of modern treaty negotiations (Eyford 2015), he is sceptical of the ability to complete treaty negotiations in a reasonable period under current protocols.

Appendix B: Revenue and Spending Envelopes Constructed for Our Analysis of FNFTA Audited Submissions

Our study includes financial data for 72 registered First Nations in Ontario for which audited financial statements containing comparable revenue and spending data were available and for which we were able to allocate items. We excluded from the analysis those statements whose entries do not permit adequate identification of the magnitude of the various revenue and expenditure envelopes discussed below. We applied several criteria for inclusion, but in the cross-section analysis, the choice of criteria had little effect on the estimated allocation of incremental own-source spending or on the estimated share of own-source revenue in total revenues of First Nations governments.

We selected Ontario as the site of the sample because it offered a balance between feasibility and representativeness. Two important features of the Ontario context stood out to recommend it. First, the legal status of most First Nations land in the province is largely resolved, which allowed us to capture own-source revenue without the turbulence that has characterized IBA payments in other regions of the country. Second, we wanted a sample that included First Nations in a variety of geographical settings, in both remote and urbanized areas.

We divided the revenue and spending items in the audited statements of the sample into the envelopes shown in Table B-1 in order to conduct comparisons (see the text for further elaboration of the "own-source revenue" category). We attempted to allocate all items to one of these envelopes, but we caution that auditors of the various First Nations do not necessarily use consistent accounting protocols or identical definitions of items.

Appendix Table B-1: First Nations' Spending Envelopes, Ontario

	Description
Revenue Envelopes	
AANDC	Grants Provided by Aboriginal Affairs and Northern Development Canada (AANDC).
Other Government Agencies (and Sources not Included Elsewhere)	Includes revenue from the following: • funding provided by other federal departments or by provincial or municipal governments (for example, Crown agencies such as the Canada Mortgage and Housing Corporation); • space rental fees; • funding channelled through other bands, provincial and territorial organizations or other First Nations organizations; • interest earned on trust funds or on band investments.
Own-source Revenue	Includes revenue from the following: • band-owned businesses; • impact and benefit agreements; • income from the Ontario First Nations Limited Partnership (OFNLP; see Matchewan First Nation 2014), plus "other" or "miscellaneous" (which is how First Nations accounts record revenue derived from confidential agreements).
Spending Envelopes	
Education Spending	All educational programs, including pre-K and post-secondary. Although we attempted to disaggregate K-12 spending from other kinds of spending, most bands do not provide this level of granularity in their accounts.
Health Spending	All spending on health programs, including traditional health initiatives, public health initiatives and public health-related education efforts.
Infrastructure Spending	Spending on capital projects and housing. We ignored this category because of the difficulty of reconciling accounting methods: some bands evaluate capital spending on an accrual basis; others do so on a cash basis.
Economic Development Programs	Programs specifically labelled "economic development." We did not include spending on band-owned businesses, unless they were called "Development Corporations," because we wanted to stay close to the idea of funding initiatives to generate economic activity and revenues.
Government and Business Administration	Includes all non-program, non-capital spending, spending on "governance" or "band administration" and reinvestments into band-owned businesses and the OFNLP.

APPENDIX C: REGRESSION RESULTS

Table C-1 shows our results from regressing the four spending envelopes on the three revenue sources. The regressands are per capita spending (in current dollars) in the respective spending envelopes. The regressors are per capita revenue (in current dollars) from three revenue sources.

The estimated impact on education and health spending arising from incremental own-source revenue does not differ from zero in a statistically significant sense; see regressions (1) and (2). As expected, by far the most important explanation of variations in education and health spending among the First Nations in the sample is variation in the AANDC grant. Variations in revenue from other government agencies have a statistically significant but modest impact on health and education spending.

Variations in own-source revenue are highly significant in explaining variations in spending on government and economic development; see regressions (3) and (4). The expected impact of $1,000 incremental own-source revenue is $600 on government/administration; the impact of incremental revenue on the other government agencies envelope is nearly identical. The impact of $1,000 incremental own-source revenue on the economic development envelope is roughly $100; unlike own-source revenue, variations in other government agency revenue have no statistically significant impact on economic development spending. Variations in the AANDC operating grant have no statistically significant impact on either outcome.

Variations in the per capita AANDC grant, grants from other governments and own-source revenue explain – in terms of adjusted R^2 from regressions (1) – (3) – between one-third and two-thirds of the variations in incremental spending on education, health and government/administration. However, these variables do a poor job of explaining incremental expenditure on economic development activities. Own-source revenue is statistically significant, but it leaves most of the variation in economic development activities unexplained.

Appendix Table C-1: Regression Results

Revenue Source	Spending Envelope			
	Education (1)	Health (2)	Government/ Business Administration (3)	Economic Development (4)
AANDC Grant	0.267*** (5.90)	0.151*** (3.04)	0.183 (1.50)	-0.079 (1.04)
Own-source Revenue	-0.010 (0.39)	0.036 (1.22)	0.599*** (8.47)	0.093** (2.09)
Other Government Agencies	0.105** (2.21)	0.136** (2.60)	0592 (4.66)	0.024 (0.29)
Constant	778*** (3.72)	–14 (0.05)	–318 (0.57)	697* (1.97)
R^2	0.53	0.40	0.73	0.08
Adjusted R^2	0.51	0.37	0.72	0.04
Number of Observations	72	72	72	72

Note: t-statistics are in parentheses.
Two-tail significance: * probability 0.1; ** probability 0.05; *** probability 0.01.

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